

Notice of Allowability

Application No.

10/609,493

Examiner

Aaron W. Carter

Applicant(s)

SHINOTSUKA ET AL.

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/1/06.
2. ☒ The allowed claim(s) is/are 1,2,6-8 and 12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☒ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JINGGE WU
SUPERVISOR BY PATENT EXAMINER

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Miles Yamanaka (45,665) on January 2, 2007.

The application has been amended as follows:

In the specification on page 4, please make the following changes:

In line 16, please replace the number – "22" – with the number – "23"–.

In line 18, please replace the number – "23" – with the number – "24"–.

In line 20, please replace the number – "24" – with the number – "25"–.

DETAILED ACTION

1. This action is responsive to papers filed on December 1, 2006.

Response to Amendment

2. In response to applicant's amendment received on December 1, 2006, all requested changes to the claims have been entered. Claims 3-5 and 9-11 have been cancelled.

Terminal Disclaimer

3. The terminal disclaimer filed on December 1, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 6/24/03 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 12/26/2000. It is noted, however, that applicant has not filed a certified copy of the 2000-404832 application as required by 35 U.S.C. 119(b).

Allowable Subject Matter

5. Claims 1, 2, 6-8 and 12 are allowed.

The following is an examiner's statement of reasons for allowance:

6. As to claims 1 and 7, none of the prior art teach or fairly suggest the limitation of "a control means for discharging a remaining electric charge of a parasitic capacitor of the photo diode by preliminarily charging a drain voltage of the MOS transistor", in combination with the

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other limitations of the claims. The prior art of Paik discloses image processing for emphasizing a specified luminance area of an image taken by an image sensor (column 4, lines 41-48, wherein a window corresponds to a specified luminance area and brightness is synonymous for luminance), wherein any plural luminance areas of the image are selected (column 4, lines 1-25 and 41-48, wherein the multiple windows corresponds to any plural luminance areas) and sensor outputs corresponding to the selected luminance areas are emphasized by using an image sensor output characteristic conversion table to increase a contrast of each image portion in each of the selected luminance areas (column 4, lines 41-60 and column 5, lines 20-22, wherein brightness levels correspond sensor outputs corresponding to the selected luminance areas, the look-up table corresponds to the conversion table and improving contrast corresponds to increasing contrast). The prior art of Yonemoto discloses a light sensor circuit representing at least one unit pixel of an image sensor has a logarithmic output characteristic (column 12, lines 14-22, wherein since the transistor is operating in the weak inverse region, it is providing a logarithmic output characteristic) and a light sensor circuit representing one unit pixel of the image sensor comprises a MOS transistor for converting a current flowing in a photo diode into a voltage signal having a logarithmic characteristic in a weak inverse state (column 12, lines 14-22, wherein since the transistor is operating in the weak inverse region, it is providing a logarithmic output characteristic). However, neither Paik nor Yonemoto disclose a control means for discharging a remaining electric charge of a parasitic capacitor of the photo diode by preliminarily charging a drain voltage of the MOS transistor, as disclosed in the limitations of claims 1 and 7.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W. Carter whose telephone number is (571) 272-7445. The examiner can normally be reached on 8am - 4:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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JINGGE WU
SUPERVISORY PATENT EXAMINER